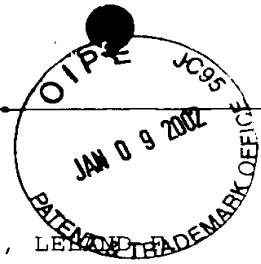


A5



x49

SEQUENCE LISTING

<110> WILSON, LEE AND
PLACE, VIRGIL A.

<120> TREATMENT OF FEMALE SEXUAL DYSFUNCTION WITH VASOACTIVE
AGENTS, PARTICULARLY VASOACTIVE INTESTINAL POLYPEPTIDE
AND AGONISTS THEREOF

<130> 9050-0013.24

<140> 09/929,818
<141> 2001-08-13

<150> 09/498,522
<151> 2000-02-04

<150> 09/181,316
<151> 1998-10-27

<150> 08/959,064
<151> 1997-10-28

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Xaa	Ala	Val	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Leu	Thr
		20					25				

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His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Xaa	Ala	Val	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Leu	Thr
		20					25				

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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Ala Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ala Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Ala Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Ala Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Ala Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Ala Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Ala Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr
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61
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Ala Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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1 5 10 15

A5 cent.

68
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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AS cont.

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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
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<221> MOD_RES
<222> (17)
<223> Nle

71
23

A5 cont.

<400> 55

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Met
20 25 30

<210> 56

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (17)

<223> Nle

<220>

<221> MOD_RES

<222> (31)

<223> Cys (Acm)

<400> 56

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Cys
20 25 30

<210> 57

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (17)

<223> Nle

<400> 57

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Thr
20 25 30

72
24

A5 cont.

<210> 58
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 58
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Ala Ala Met
20 25 30

<210> 59
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 59
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Ala Ala Ala
20 25 30

<210> 60
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle

72
~~25~~

<400> 60

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Lys
20 25 30

<210> 61

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (17)

<223> Nle

<400> 61

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 62

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (10)

<223> 2-Nal

<400> 62

His Ser Asp Ala Val Phe Thr Asp Asn Xaa Thr Lys Leu Arg Lys Gln
1 5 10 15

Ala Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 63

<211> 31

<212> PRT

<213> Artificial Sequence

73
~~26~~

5
Acont.

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (17)

<223> Nle

<400> 63

His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Ala Ala Met
20 25 30

<210> 64

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (17)

<223> Nle

<220>

<221> MOD_RES

<222> (29)

<223> Unknown amino acid

<220>

<221> MOD_RES

<222> (30)

<223> Unknown amino acid

<400> 64

His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Xaa Xaa Phe
20 25 30

<210> 65

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

74
21

A⁹ cont.

<220>
<221> MOD_RES
<222> (6)
<223> p-F-Phe

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<220>
<221> MOD_RES
<222> (31)
<223> Cys (Acm)

<400> 65
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Cys
20 25 30

<210> 66
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (6)
<223> p-F-Phe

<220>
<221> MOD_RES
<222> (10)
<223> p=NH₂-Phe

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 66
His Ser Asp Ala Val Phe Thr Asp Asn Phe Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 67
<211> 31

75
~~28~~

As cont.

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (31)
<223> Cys (Acm)

<400> 67
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15
Ala Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Cys
20 25 30

<210> 68
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 68
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Lys Lys Gln
1 5 10 15
Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Met
20 25 30

<210> 69
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (10)
<223> p-NH2-Phe

<220>
<221> MOD_RES

76
29

AS
cont.

<222> (17)

<223> Nle

<400> 69

His Ser Asp Ala Val Phe Thr Asp Asn Phe Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 70

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (6)

<223> p-F-Phe

<220>

<221> MOD_RES

<222> (17)

<223> Nle

<220>

<221> MOD_RES

<222> (31)

<223> Cys (Acm)

<400> 70

His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Cys
20 25 30

<210> 71

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 71

His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Ala Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Met
20 25 30

A5 cont.

77
30

<210> 72
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 72
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Ala
20 25 30

<210> 73
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 73
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Met
20 25 30

<210> 74
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES

78

31

A5
Acut.

<222> (6)
<223> p-F-Phe

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<220>
<221> MOD_RES
<222> (31)
<223> Cys (Acm)

<400> 74
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Cys
20 25 30

<210> 75
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 75
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Ser
20 25 30

<210> 76
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (6)
<223> p-F-Phe

79
~~32~~

5
Acont.

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 76
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 77
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (12)
<223> Orn

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 77
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Xaa Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 78
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 78
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

80
33

A5 cont.

Xaa Ala Val Lys Lys Tyr Leu Asn Ala Leu Lys Lys Gly Gly Thr
20 25 30

<210> 79
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 79
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Ala Ala Ala
20 25 30

<210> 80
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 80
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Ala Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 81
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle

81
~~34~~

A5 cont.

<400> 81

His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Lys
20 25 30

<210> 82

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (10)

<223> p-NH2-Phe

<220>

<221> MOD_RES

<222> (17)

<223> Nle

<220>

<221> MOD_RES

<222> (31)

<223> Cys (Acm)

<400> 82

His Ser Asp Ala Val Phe Thr Asp Asn Phe Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Cys
20 25 30

<210> 83

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (17)

<223> Nle

<220>

<221> MOD_RES

<222> (31)

<223> Cys (Acm)

82
35

AScent.
<400> 83

His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Cys
20 25 30

<210> 84

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (17)

<223> Nle

<400> 84

His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Met
20 25 30

<210> 85

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (17)

<223> Nle

<400> 85

Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln Xaa
1 5 10 15

Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 86

<211> 27

<212> PRT

<213> Artificial Sequence

83
36

AS cont.

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 86
Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln Xaa
1 5 10 15

Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 87
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (1)
<223> N-CH3-Ala

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 87
Ala Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 88
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (12)
<223> Orn

84
37

A5
cont.

<220>
<221> MOD_RES
<222> (31)
<223> Cys (Acm)

<400> 88
His Ser Asp Ala Leu Phe Thr Asp Asn Tyr Thr Xaa Leu Arg Lys Gln
1 5 10 15

Ala Ala Ala Lys Tyr Leu Asn Thr Val Leu Thr Gly Gly Cys
20 25 30

<210> 89
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (6)
<223> p-F-Phe

<220>
<221> MOD_RES
<222> (10)
<223> 2-Nal

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 89
His Ser Asp Ala Val Phe Thr Asp Asn Xaa Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Met
20 25 30

<210> 90
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (6)
<223> p-F-Phe

A5 cont.

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<220>
<221> MOD_RES
<222> (31)
<223> Cys (Acm)

<400> 90
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Lys Lys Gln
1 5 10 15

Xaa Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Cys
20 25 30

<210> 91
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (6)
<223> p-F-Phe

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<220>
<221> MOD_RES
<222> (31)
<223> Cys (Acm)

<400> 91
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Cys
20 25 30

<210> 92
<211> 31
<212> PRT
<213> Artificial Sequence

86
39

A5 cont.

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (12)
<223> Orn

<220>
<221> MOD_RES
<222> (31)
<223> Cys (Acm)

<400> 92
His Ser Asp Ala Leu Phe Thr Asp Asn Tyr Thr Xaa Leu Arg Lys Gln
1 5 10 15

Ala Ala Val Lys Lys Tyr Leu Asn Thr Val Leu Thr Gly Gly Cys
20 25 30

<210> 93
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (6)
<223> p-F-Phe

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<220>
<221> MOD_RES
<222> (31)
<223> Cys (Acm)

<400> 93
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Ala Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Cys
20 25 30

<210> 94
<211> 28
<212> PRT
<213> Artificial Sequence

87
40

A5-
cont.

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (1)
<223> N-Me-Ala

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 94
Ala Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 95
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (6)
<223> p-F-Phe

<220>
<221> MOD_RES
<222> (10)
<223> p-NH2-Phe

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 95
His Ser Asp Ala Val Phe Thr Asp Asn Phe Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 96
<211> 31

88
41

<212> PRT
<213> Artificial Sequence

As cont.
<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 96
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15
Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Met
20 25 30

<210> 97
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (10)
<223> p-NH2-Phe

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 97
His Ser Asp Ala Val Phe Thr Asp Asn Phe Thr Lys Leu Arg Lys Gln
1 5 10 15
Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr
20 25

<210> 98
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES

89
42

Acmt.

<222> (17)
<223> Nle

<220>
<221> MOD_RES
<222> (31)
<223> Cys (Acm)

<400> 98
His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Thr Gly Gly Cys
20 25 30

<210> 99
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle.sup.

<400> 99
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 100
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (17)
<223> Nle.sup.

<400> 100
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

90
~~43~~

A5 cont.

<210> 101
<211> 28
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 101

His Ser Asp Ala Val Tyr Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 102

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 102

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Phe Leu Asn Ser Ile Leu Asn
20 25

<210> 103

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 103

His Ser Asp Ala Val Phe Ser Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 104

<211> 28

<212> PRT

<213> Artificial Sequence

91
44

AS-
A cont.

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 104

His Ser Asp Ala Val Phe Lys Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 105

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 105

His Ser Asp Ala Val Phe Gln Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 106

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 106

His Ser Asp Ala Val Phe Asn Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 107

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 107

His Ser Asp Ala Val Phe Arg Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

92
~~45~~

A5
Acrit.

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 108
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 108
His Ser Asp Ala Val Phe Thr Asp Arg Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 109
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 109
His Ser Asp Ala Val Phe Thr Asp Gln Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 110
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 110
His Ser Asp Ala Val Phe Thr Asp Lys Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 111
<211> 28

A5 cont.

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 111
His Ser Asp Ala Val Phe Thr Asp Leu Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 112
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 112
His Ser Asp Ala Val Phe Thr Asp Ser Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 113
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 113
His Ser Asp Ala Val Phe Thr Asp Thr Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 114
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

94
A7

<400> 114

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Leu Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 115

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 115

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Lys Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 116

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 116

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Asn Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 117

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 117

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Gln Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

A5 cont.

<210> 118
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 118
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Arg Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 119
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 119
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Thr
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 120
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 120
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Ser
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 121
<211> 28
<212> PRT
<213> Artificial Sequence

96
49

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 121

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Leu
1 5 10 15

Met Ala Val Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 122

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 122

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Lys
1 5 10 15

Met Ala Val Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 123

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 123

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Asn
1 5 10 15

Met Ala Val Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 124

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 124

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Arg
1 5 10 15

97
50

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

As cont.
<210> 125
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 125
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Arg Ser Ile Leu Asn
20 25

<210> 126
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 126
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Gln Ser Ile Leu Asn
20 25

<210> 127
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 127
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Lys Ser Ile Leu Asn
20 25

<210> 128
<211> 28

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 128
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Leu Ser Ile Leu Asn
20 25

<210> 129
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 129
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Ser Ser Ile Leu Asn
20 25

<210> 130
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 130
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Ser Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 131
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

99
52

<400> 131

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Ser Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 132

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (20)

<223> Orn

<400> 132

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Xaa Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 133

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 133

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Arg Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 134

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

100
53

<400> 134

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Phe Asn Ser Ile Leu Asn
20 25

<210> 135

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 135

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Phe Leu Asn
20 25

<210> 136

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 136

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Tyr Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 137

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 137

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Tyr Asn Ser Ile Leu Asn
20 25

<210> 138
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 138
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Tyr Leu Asn
20 25

<210> 139
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 139
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Leu Leu Asn
20 25

<210> 140
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 140
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Ile Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 141
<211> 28
<212> PRT
<213> Artificial Sequence

102
~~55~~

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 141

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Ile Asn Ser Ile Leu Asn
20 25

<210> 142

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 142

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Val Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 143

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 143

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Val Asn Ser Ile Leu Asn
20 25

<210> 144

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

75 cont.

103
~~56~~

A5
Acont.

<222> (13)
<223> Nle

<400> 144
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Xaa Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 145
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (23)
<223> Nle

<400> 145
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Xaa Asn Ser Ile Leu Asn
20 25

<210> 146
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (26)
<223> Nle

<400> 146
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Xaa Leu Asn
20 25

<210> 147
<211> 28

104
81

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 147
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Arg Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 148
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 148
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Leu Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 149
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 149
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Leu Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 150
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

105
~~88~~

<220>
<221> MOD_RES
<222> (14)
<223> Orn

A5. cont.

<400> 150
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Xaa Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 151
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (21)
<223> Orn

<400> 151
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15
Met Ala Val Lys Xaa Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 152
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (14)
<223> Nle

<400> 152
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Xaa Lys Gln
1 5 10 15
Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

106
59

5
A cont.

<210> 153
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (21)
<223> Nle

<400> 153
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Xaa Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 154
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 154
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Arg Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 155
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 155
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Ser Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 156
<211> 28

107
~~60~~

AS cont.

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 156
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Gln Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 157
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (15)
<223> Orn

<400> 157
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Xaa Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 158
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 158
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Met Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 159
<211> 28
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 159

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Leu Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 160

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 160

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Leu Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 161

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 161

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Val Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 162

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

5
Acent.

109
~~62~~

<400> 162

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Lys Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 163

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 163

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Lys Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 164

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 164

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Ile Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 165

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 165

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Ile Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

A5 cont.

AS-1.
Acont.

<210> 166
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>
<221> MOD_RES
<222> (19)
<223> Nle

<400> 166
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Xaa Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 167
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 167
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Leu Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 168
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 168
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Asn Ile Leu Asn
20 25

<210> 169
<211> 28
<212> PRT
<213> Artificial Sequence

A5
Acont.

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 169
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Leu Ile Leu Asn
20 25

<210> 170
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 170
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Gln Ile Leu Asn
20 25

<210> 171
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 171
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Val Asn
20 25

<210> 172
<211> 28
<212> PRT
<213> Artificial Sequence

112
65

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 172

His Ser Phe Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 173

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 173

His Ser Tyr Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 174

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 174

His Ser Asp Ala Val Phe Phe Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 175

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 175

His Ser Asp Ala Val Phe Tyr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

113
~~66~~

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

A5 cont.
<210> 176
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 176
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Phe Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 177
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 177
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Tyr Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 178
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 178
His Ser Asp Thr Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 179
<211> 28

114
67

A5 cont.

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 179
His Ser Asp Ser Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 180
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 180
His Ser Asp Asn Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 181
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 181
His Ser Asp Gln Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 182
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

115
~~68~~

<400> 182

His Ser Asp Ala Val Thr Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 183

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 183

His Ser Asp Ala Val Ser Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 184

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 184

His Ser Asp Ala Val Asn Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 185

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 185

His Ser Asp Ala Val Gln Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

A⁵ cont.

116
~~69~~

<210> 186
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 186
His Ser Asp Ala Val Ala Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 187
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 187
His Ser Asp Ala Val Phe Thr Thr Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 188
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 188
His Ser Asp Ala Val Phe Thr Ser Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 189
<211> 28
<212> PRT
<213> Artificial Sequence

117
70

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 189

His Ser Asp Ala Val Phe Thr Asn Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 190

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 190

His Ser Asp Ala Val Phe Thr Gln Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 191

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 191

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Ser
20 25

<210> 192

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 192

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

118
71

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Gln
20 25

AS cont.
<210> 193
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 193
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Gln Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 194
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 194
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Gln Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 195
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 195
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Ser Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 196
<211> 28

119
72

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 196
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Gln Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 197
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 197
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Met Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 198
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 198
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Ile Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn
20 25

<210> 199
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analog

AS
Acont.

120
73

<400> 199

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Met Asn Ser Ile Leu Asn
20 25

<210> 200

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 200

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Met Leu Asn
20 25

<210> 201

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 201

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Thr
20 25

<210> 202

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<220>

<221> MOD_RES

<222> (17)

<223> Nle

Asn it.

121
74

<400> 202

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

5. cont.
Xaa Ala Val Lys Lys Tyr Leu Asn Ser Ala Ala Thr
20 25

<210> 203

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 203

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn Gly Cys
20 25 30

<210> 204

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 204

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn Gly Cys
20 25 30

<210> 205

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic VIP
analog

<400> 205

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn Gly Cys
20 25 30

122
75

75
cont.

<210> 206
<211> 4
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Melanocortin
peptide

<400> 206
His Phe Arg Trp
1

<210> 207
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic VIP
analogs

<220>
<221> MOD_RES
<222> (17)
<223> Nle

<400> 207
His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln
1 5 10 15

Xaa Ala Val Lys Lys Tyr Leu Asn Ser Val Leu Ala
20 25
